REMARKS

This application contains claims 1 –9 amended, as set forth above, (1) to address the Examiner' s objection to claim 1 and 35 USC 112 rejections of claims 4, 8 and 9, and (2) to otherwise more particularly point out and distinctly claim Applicant's invention. In this regard, the original claims were translated from a German application that had been prepared Euro-style. The amended claims present the invention in a format more consistent with U.S. practice.

Claim 1 now incorporates the Examiner's suggestion, and further provides antecedent basis for claims 8 and 9. Claims 2 and 3 have been amended (1) to specify that the water is absorbed by the coating, and (2) to delete the controversial term "nanometer range". Claim 4 has adopted a Markush format.

Reconsideration and allowance of this application in the light of these amendments and the following remarks is respectfully requested.

Claims 1,4 and 8 stand rejected under 35 USC 102(e) in view of Roesser et al. US 6,536,546 B2 on the asserted grounds that Roesser et al. teaches shortening the starting time of a CO catalytic reactor in a fuel cell system by "coating the gas flow passage" leading to/from the reactor with hydrophilic zeolite. Applicant respectfully traverses the rejection on the principle ground that Roesser does not teach "coating" the reactant flow passages with zeolite as alleged by the Examiner.

Applicant's invention is directed to fuel cell systems having flow passages and/or flow chambers that conduct moist gases to/from the fuel cell. Essentially, Applicant coats at least part of the inner side (i.e. gas side) of the passages/chambers with a hygroscopic material that sorbs water from the gases at low temperatures and releases it at higher temperatures. The sorbed water is held in the coating in distributed form which reduces its freezing point, and is particularly useful for humidifying the fuel cell's reactant gases during start-up of the fuel cell system under subfreezing (e.g. – 40 °C) conditions.

Roeser et al. involves CO-oxidation catalytic converters used to clean-up reformate gas supplied to a fuel cell, and more particularly to removing those components (e.g. H_2O, fuel, CO etc) from the reformate gas that would otherwise condense and contaminate the CO-oxidation catalyst. To this end, Roeser et al remove the contaminants from the reformate gas by conducting the reformate through a perforated section of a pipe that is surrounded by a bed of an adsorbent (e.g. zeolite) held in a reaction chamber defined by a casing that surrounds the perforated section of the first pipe. The contaminants diffuse out of the gas, through the perforations, and into the bed of adsorbent. Suffice to say, Roeser et al. does not teach or suggest coating the inside surfaces of the gas passages with a layer of adsorbent. Accordingly, the 35 USC 102(e) rejection is improper.

Notably, Roeser's adsorbent bed is relatively deep, compared to Applicant's coating, which limits the rate of water uptake by the adsorbent to the diffusion rate of water into the depths of the bed. Applicant's coating, on the other hand, presents a large surface area and relatively shallow depth of absorbent to the reformate for relatively rapid sorbtion of water by the coating. Moreover, Roeser undesirably requires a separate reactor for retaining the adsorbent bed, which not only adds to the cost of the system, but also

complicates packaging of the system's components due to higher component volumes.

In view of the foregoing, Applicant respectfully requests the Examiner to reconsider her objections/ rejections, to allow the claims as amended, and to pass this case to issue at her earliest convenience.

Respectfully submitted

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